

Remarks/Arguments:

In the Specification, the disclosure is objected to because it contains an embedded hyperlink. Applicants have replaced the hyperlink with the text "the HAVi Specification-Specification of the Home Audio Video Interoperability (HAVi) Architecture, Version 1.0 beta, available from HAVi, Inc. of San Ramon, California, USA" in accordance with the Examiner's requirement to delete the embedded hyperlink.

Claims 1-14 are pending in this application. All pending claims are presently rejected.

Claims 1-6 and 8-14 are rejected under 35 U.S.C. § 112. Claim 1 is amended to recite "a virtual device functioning as a gateway" rather than "a virtual device functioning a gateway" in accordance with the interpretation used for examination purposes to make clear what is meant by this limitation. In addition, claim 1 is amended to recite "a virtual-device-controller for providing said virtual device corresponding to the first device plugged-in with an IP identifier for the second network to access said virtual device responsive to information supplied from said first plug-in detector" rather than "a virtual-device-controller for providing said virtual device corresponding to the first device plugged-in with an IP identifier, for the second network accessing to said virtual device, responsive to information supplied from said first plug-in detector" substantially in accordance with the interpretation used for examination purposes to make clear what is meant by this limitation.

Claims 2, 5, and 6 are rejected on the grounds that there is insufficient antecedent basis for "controller." The Examiner states it is unclear whether "controller" is referring to the "virtual-device-controller" or "address-correspondence-controller" and interpreted "controller" as the "virtual-device-controller" for examination purposes. Claims 2, 5, and 6 have been amended to replace "controller" with "virtual-device-controller" in accordance with the interpretation used for examination purposes to address the antecedent basis rejection.

Claims 2, 3, 4, 8, 9, 10, and 11 are rejected as indefinite because the limitation of "plugged-in" in these claims is not understood by the Examiner. Claims 2, 3, 4, 8, 9, 10,

and 11 are amended to replace "plugged-in" with "plugged in" where appropriate in accordance with the interpretation used for examination purposes.

Claims 4 and 11 were further rejected on the basis that there is insufficient antecedent basis for the limitation "the first devices." Claims 4 and 11 are amended to replace "the first devices" with "devices" in accordance with the interpretation used for examination purposes to address the antecedent basis rejection.

Claims 6 and 13 are rejected as indefinite because the Examiner is unclear as to what the limitation "other cases than a case" means. The Examiner interpreted this limitation as "a case" for examination purposes. This limitation recites "other cases than a case where said virtual device includes a virtual device corresponding to one of the first device plugged in and the second device plugged in." What is meant by the limitation "other cases than a case" is a case/situation where the virtual device does not include a virtual device corresponding to one of the first device plugged in and the second device plugged in, rather than as interpreted by the Examiner as a first case where said virtual device includes a virtual device corresponding to one of the first device plugged in and the second device plugged in. Although applicants feel that this is clearly stated, applicants have amended claims 6 and 13 for clarity to recite "(i) a first case where said virtual device does not include a virtual device corresponding to one of the first device plugged in and the second device plugged in, and (ii) a second case where said virtual-device-controller determines that said virtual device needs to update a software version thereof."

Claims 6 and 13 were further rejected because the Examiner was unclear whether the limitation "virtual device includes a virtual device" refers to an initial virtual device or the virtual device included in the virtual device. The limitation of the claims (as amended) recites "the virtual device does not include a virtual device corresponding to one of the first device plugged-in and the second device plugged-in." This limitation is meant to be interpreted as follows. The first instance of "virtual device" refers to a device that includes one or more virtual devices corresponding to plugged-in devices. The second instance of "virtual device" is meant to be interpreted as the phrase "virtual device corresponding to one of the first device plugged-in and the second device plugged-in." Thus, the second instance of virtual device in 6(i) and 13(i) refers to a virtual device corresponding to one of

the first device plugged-in and the second device plugged-in and the first instance of virtual device refers to a device that includes these virtual devices. This interpretation is supported in the specification at page 29, lines 14-19.

Claim 4 is rejected because the Examiner is unclear as to whether "the virtual device" referred to in the claim is the virtual device or the virtual device included within the virtual device. As in claims 6 and 13, the first instance of virtual device in claim 3 in the phrase "said virtual device includes a virtual device corresponding to the first device plugged-in" refers to a virtual device and the second instance refers to a virtual device corresponding to a device plugged-in corresponds to the second instance. Therefore, it is clear that when referring to a virtual device on its own that this is the virtual device that includes one or more other devices and when referring to a virtual device corresponding to a first/second device that this is the virtual device included in the virtual device.

Claim 5 was rejected because the limitation "the device" in line 12 of claim 5 contains insufficient antecedent basis. The Examiner is directed to line 8 of claim 5 which recites "wherein said controller detects a plug in of a device." The device referred to in line 8 of claim 5 provides antecedent basis for the device in line 12 of claim 5.

Claim 6 was rejected because the limitation "the device" in line 10 contains insufficient antecedent basis for this limitation. Applicants have amended claim 6 to recite that the device is the "first" device in accordance with the interpretation used for examination purposes.

Claim 14 was rejected on the basis that there is insufficient antecedent basis for "the message" in this claim. Claim 14 is amended to replace "the message" with "messages" substantially in accordance with the interpretation used for examination purposes.

Claims 4-6, 11, and 12 are rejected because the Examiner finds that the phrase "necessary" renders the claim indefinite since it is unclear what is necessary information. The applicants have amended claims 4-6, 11, and 12 to remove the phrase "necessary."

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Claim 6 is objected to because the claim recites "downlowder" rather than "downloader." Claim 6 has been amended to recite "downloader" rather than "downlowder" in accordance with the interpretation assumed for examination purposes.

Claim 14 is objected to because the limitation "both the commands" should be "both of the commands." Claim 14 is amended to recite "both of the commands" rather than "both the commands" in accordance with the interpretation used for examination purposes.

Accordingly, applicants have amended and/or explained claims 1-6 and 8-14 to address each of the Examiner's rejections/objections of these claims under 35 U.S.C. § 112. No new matter has been added. Therefore, for the reasons set forth above, the rejections and objections under 35 U.S.C. § 112 should be withdrawn.

The present invention is a method and apparatus for connecting a device on a first network such as a HAVi network with a device on a second network such as an IP network through a gateway. Virtual devices are set up in the gateway for enabling communication between one or more devices on the first network and one or more devices on the second network. The virtual devices establish connections and convert commands issued by devices on one network into commands that devices on the other network can comprehend.

The Examiner rejected claims 1, 7, 8, 11, and 14 under 35 U.S.C. §102 as being anticipated by U.S. Patent No. 6,496,862 to Akatsu et al (hereinafter Akatsu). It is respectfully submitted, however, that the claims are patentable over the art of record for the reasons set forth below.

Akatsu provides a method for remote monitoring and control of devices in a network. Remote monitoring and control is provided through the use of a gateway that maintains an address mapping table for enabling connection between devices across networks. The gateway converts data and signals between the networks to enable communication.

Applicants' invention, as recited by claim 1, includes a feature which is neither disclosed nor suggested by the art of record, namely:

. . .(d) a virtual device functioning as a gateway for the first device plugged in the first network and a second device plugged in the second network to communicate with each other, said virtual device converting commands issued by each of the first and second devices into commands the second and first devices, respectively, can comprehend; . . .

This means that a command such as "play" issued by the first device can be comprehended as "play" by a second device in another network without requiring that the devices be compatible with one another. This feature is found in the originally filed application at page 8, lines 9 and 10. No new matter has been added.

In Akatsu, the gateway converts data and signals from one network to another. See, column 10, lines 16-19 and 39-41. Akatsu, however, does not disclose, teach or suggest the conversion of commands issued by a device on one network such that that the command can be comprehended by another device on another network. In claim 1, a virtual device functioning as a gateway converts commands issued by each of first and second devices into commands second and first devices, respectively, can comprehend. This is different because Akatsu does not disclose, teach, or suggest converting commands but rather only teaches converting data and signals. Further, none of the art of record disclose, teach, or suggest the conversions of commands as indicated in claim 1.

It is because applicants include the feature of converting commands issued by each of first and second devices into commands the second and first devices can comprehend that the following advantage is achieved. Specific commands such as play issued by a first device on a first network such as a videotape recorder within a HAVi network can be comprehended as a play command in another network such as an internet protocol videotape recorder in an IP network without the individual devices being compatible with one another.

Accordingly, for the reasons set forth above, amended claim 1 is patentable over the art of record.

Independent claim 8 includes features similar to those discussed above with respect to claim 1. Accordingly, claim 8 is also patentable over the art of record for the reasons set forth above that claim 1 is patentable.

Claims 7, 11, and 14 include all the features of either claims 1 or 8 from which they depend, either directly or indirectly. Thus, claims 7, 11, and 14 are also patentable over the art of record for at least the reasons set forth above.

In addition, claim 7 includes additional limitations not found in the art of record. Specifically, the art of record does not disclose, teach, or suggest a "command converter" or a "command-correspondence-controller." The office action refers to several passages within Akatsu to teach these limitations. However, each of the passages refers to the conversion of signals and data, rather than the conversion of commands such as "play." Accordingly, since Akatsu does not refer to converting commands, Akatsu does not disclose, teach, or suggest a command converter for a command-correspondence-controller. Thus, claim 7 is patentable for this additional reason.

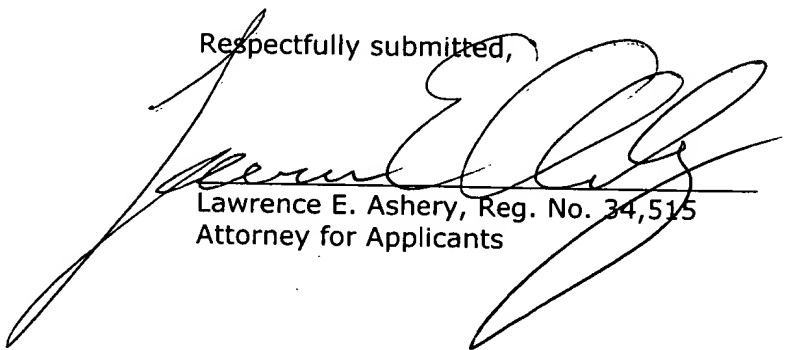
Claims 2-6, 9, 10, 12, and 13 are rejected under 35 U.S.C. §103(a) as being unpatentable over Akatsu in view of an article by Peter M. Corcoran entitled "Mapping Home-Network Appliances TCP/IP Sockets Using a Three Tiered Gateway Architecture" (hereinafter "Corcoran"). Claims 2-6, 9, 10, 12 and 13 depend from either claim 1 or 8 and, thus, contain all of the limitations thereof. Claims 1 and 8 include a patentable feature, namely a virtual device converting commands issued by each of first and second devices into commands the second or first devices, respectively, can comprehend. As discussed above, Akatsu does not teach this feature. Further, none of the art of record, including Corcoran disclose, teach, or suggest this feature. Thus, Akatsu in view of Corcoran does not disclose, teach, or suggest this feature. Accordingly, claims 2-6, 9, 10, 12, and 13 are also patentable over the art of record for the reasons set forth above with respect to claim 1.

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In view of the amendments and remarks set forth above, the above-identified application is in condition for allowance which action is respectfully requested.

Respectfully submitted,



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